TRANSFORMATION TRENDS—17 MARCH ISSUE

"Of course there will always be resistance to change -- that's not surprising -- change isn't easy. People get comfortable to where they are in life. And this is a big institution. I suppose changing it is like turning a giant ship. It doesn't spin on a dime. It's not a speedboat. It's an important institution, and it's probably good that it takes time. But the ship is turning. I do believe that we are making progress. I can feel the turn."

Defense Secretary Donald Rumsfeld

Testimony of Art Cebrowski, Director, Office of Force Transformation, before the Senate Armed Services Committee's Emerging Threats and Capabilities Subcommittee, 14 March 2003

In surveying the course of transformation over the past year, we see considerable progress throughout the department. But, of course many of these are first steps. Our future efforts to transform must not just sustain the current effort, but must outpace the rate of change evident in the increasingly interconnected world around us.

When we last spoke, September 11th 2001 had focused considerable attention on the concept of transformation. Indeed, one year ago it was easy to view our future as a narrow consequence of those events. However, as we have come to more fully appreciate, transformation is not simply a response to global terrorism. While the

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events of September 11th triggered a "system perturbation" – a systemic shock to the stability of the international system – it is clear that profound change was already occurring in that system. Transforming defense, its role in national security, its management and the force itself, is a national, corporate, and risk management strategy that responds to that change.

While "change" – uncertainty -- is an ever-present part of the strategic landscape, energy for current change seems to have emerged from three broadly defined events of the early 1990s. The first was demise of the bi-polar template that shaped U.S. security strategy; the second was the aftermath of a great military victory in the Persian Gulf, which had validated much of our previous military investment strategies; and the third was the ascendance of information age warfare. In isolation, each provided a host of relevant issues to consider as we framed the strategic context within which we would build a future military. However, taken together they suggested a deeper assessment of the strategic environment. The trends are there – escalating ethnic and religious strife, the reshaping of nation-states, shifting and emerging economic centers, the proliferation of information technologies in relatively undeveloped societies and nations, and the emergence of global, transnational terrorism. September 11th was a violent manifestation of these trends – trends that continue to reshape our government, our economy and even our society.

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Understanding how transformation addresses uncertainty is incredibly important as we move forward. This is a very different way of thinking for us. For a very long time our focus was at the top – great power war in a global security environment where our security concerns were largely viewed through the prism of state-vs-state conflict. Even as the threat of great power war diminished, we remained focused largely on state-vs-state conflict – with the threat recast as the "rogue." Meanwhile, sources of power, conflict and violence continued to change and spread more broadly within the system. Today, we find that power is moving to the larger system level – an international system evolving as a consequence of globalization – while violence is migrating downward to the level of individuals or collections of individuals. New threats are emerging from societies and people who remain disconnected from the larger evolving global system. These threats have the potential to create severe perturbations to this system, and the resulting shockwaves cross all economic sectors and social boundaries as they propagate around the world. On September 11th, we witnessed this phenomenon. We were not attacked by a nation or by an army; we were attacked by a group of individuals -- non-deterables -- keen to die for their cause. As the consequences of this systemic change become more apparent, we're discovering that our force capabilities are out of balance with emerging realities.

There is another way of understanding this. In the second half of the 20th century (prior to 1990), we balanced our global interests and homeland security on the

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fulcrum of mutually assured destruction and containment. It worked well versus the Soviet Union, but what it yielded was surrogate wars. We lived a useful fiction that depicted all surrogate wars as lesser-included cases of the larger strategic problem – which they were not. However, that strategic system "worked" given the types of forces we had, and given the era in which we lived – namely, industrialization. That construct dissolved with the fall of the Berlin Wall, and we are just now readjusting our security perspectives in light of this altered system; a strategy that emerges is transformation.

The need to transform the military as well as the organizations and processes that control, support and sustain it is compelling. This need is a by-product of the effects of globalization on the international security order, as well as the transition from the industrial age to the information age. And while we might point to a beginning of transformation, we shouldn't foresee the end -- the President's mandate was "to challenge the status quo and envision a new architecture of American defense for decades to come." Both he and Secretary Rumsfeld have rightly seen that transformation is a continuing process that not only anticipates the future, but also seeks to create that future. It does so, in part, by co-evolving technology, organizations, processes. However, it begins and ends with culture.

Transformation is first and foremost about changing culture. Culture is about behavior – about people – their attitudes, their values and their beliefs. What we believe, what we value, and our attitudes about the future are ultimately reflected in

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our actions – in our strategies and processes, and the decisions that emerge from them. The Department's strategy for transformation understands this; its actions reflect that understanding. Consider these Departmental actions in light of the new security environment discussed above:

- **Crafted a new defense strategy (with Transformation as a centerpiece)**
- **Rewrote the Unified Command Plan**
- **Completed a new Nuclear Posture Review**
- **Replaced the two-Major Theater of War force-sizing construct**
- **Moved from a threat-based to a capabilities based approach to defense planning focused not on the "who" but rather the "how" our national security might be threatened.**
- **Reorganized the Department to better focus space activities**
- **Initiated work with the Allies to develop a new NATO command structure as well as a NATO Response Force**
- **Expanded the mission of Special Operations Command**
- **Made some tough program decisions**

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Of course, this last item, the cancellation of programs – or how many three- and four-star officers were fired -- represents the yardstick by which many would have the Department measure its progress. That would be a wholly unconstructive approach, and one counter to Secretary Rumsfeld's stated intent -- "we are working to promote a culture in the Defense Department that rewards unconventional thinking – a climate where people have the freedom and flexibility to take risks and try new things." Consider these other "new things":

- **Created an Under Secretary position for intelligence**
- **Created an Assistant Secretary for Homeland Defense**
- **Development of Joint Operations Concepts**
- **Reorganization of the JROC**
- **New service-based contributions to Joint Warfare**
  - **Army Objective Force**
  - **Air Force CONOPS**
  - **Navy Expeditionary Strike Groups, TACAIR Integration**
- **Created a Joint National Training Capability in order to better train as we intend to fight**

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- **Process revisions**
  - **New DoD Acquisition Directive and Instruction**
  - **Legislative relief proposals**
- **Invested in capabilities to support the warfighter**
  - **Joint C4ISR**
  - **Precision Strike**
  - **Adaptive logistics**
  - **Mobility enhancements**

In the aggregate, these activities represent the beginning of "the continuing process" of transformation as we "create/anticipate the future." They represent the "co-evolution of concepts, processes, organizations and technology." They are consistent with the vision outlined in the President's remarks, and are representative of progress toward the goals outlined in the 2001 Quadrennial Defense Review.

As a consequence of this progress, we also see "new competitive areas," and a "revaluing of attributes" consistent with information age phenomena and the demands of the emerging security environment. One measure of this revaluing is

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what is called "information fraction." In other words, what is the measure of a system's ability to access and contribute to a larger information network? Can it contribute to the "speed of command" and "shared situational awareness" so necessary for success in current and future battlefields? The concept of "information fraction" provides an important insight into a "revaluing of attributes" that characterizes transformation. When we talk with Sergeants at Ft Lewis about their Strykers, they're not only happy about the ride and relative quiet it provides, they're excited about the situational awareness that can be brought into that vehicle through its information systems; the Stryker has a high information fraction. The Army's Land Warrior and Future Combat System (FCS) also have very high information fractions. Similarly, when Marine pilots talk about the Joint Strike Fighter, they not only talk about its low radar cross section and precision weapons -- they talk about the aircraft's sensors and its ability to access and distribute information as part of a larger naval expeditionary sensor network. The Joint Strike Fighter has a very high information fraction.

Transformation is yielding new sources of power. Because the global pace of change is accelerating, new sources of power fuel our ability to maintain advantage in a competitive landscape where yesterday's winner is tomorrow's target. Our ability to capitalize on new sources of power will determine, in part, our success in the future. One such source is information sharing through robust network structures. We have a mountain of evidence – from simulation, from experimentation, and from

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real world experience – that substantiate the power of network behavior. Many think of network the noun – in other words, a "thing." They forget that to "network" is also a verb – a human behavior. So when we shift from being platform centric to network centric, we shift from focusing on "things," to focusing on behavior or action. That is where we find the power. Each of the Departments efforts reflects an understanding of this phenomenon. Some examples include the Navy's ForceNet and its creation of the Network Warfare Command, the Army's Battle Command System for the Legacy and Interim Forces, the Warfighter Information Network for the Objective Force, and the Early Entry Command post concept. The Air Force is pursuing Network Centric Collaborative Targeting and "predictive battlespace awareness" under the Space C2ISR Task Force CONOPS, and the Marine Corps intends to exploit an Expeditionary Sensor Grid through CAC2S. These efforts reflect the on-going shift from platform-centric to network-centric thinking that is a key to transformation.

When Secretary Rumsfeld signed the Quadrennial Defense Review in September 2001, he created the vision for transformation. The six operational goals and the four pillars of transformation get the most attention. However, one of the most powerful concepts in that document, and one that has received the least scrutiny, is "deter forward." "Deter forward" is profoundly important because it forces us to change the way we think about force capabilities and disposition. Consider for a moment the implications of deterring and defeating an enemy with minimal

reinforcements. In peacetime, we assure allies, we dissuade competition, and we deter hostile acts. If forced to compel resolution with military force, we bring forces to bear in the traditional fashion; the relationship between the capabilities we bring to bear and the forces and the timeline demanded by the circumstances is a measure of the risk we are willing to accept. This is normal industrial age thinking. In the Information Age, warfare is increasingly path dependent – small changes in the initial conditions result in enormous changes in outcome. Thus, speed becomes a more valuable characteristic of the entire force because we want to be able to define or alter the initial conditions on terms favorable to our interests. The goal is to develop high rates of change that an adversary cannot outpace, while sharply narrowing that adversary's strategic options. Only certain kinds of forces are going to be able to do that – forces oriented around speed. This is not so much speed of response, as it is speed within the response -- speed of deployment, speed of organization, speed of employment, and speed of sustainment. In other words, we may choose our punches with great care (strategy), only to unleash them with blinding speed (operations, tactics). Networking is the key enabler of the battlespace transparency necessary for that speed.

The entry fee for the "deter forward" force is a network structure, network centric organizations and an understanding of the emerging theory of war for the information age – Network Centric Warfare (NCW). NCW is not about technology per se – it is about behavior. It is not about the network; rather, it is about how

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wars are fought, how power is developed. During the industrial age, power came from mass. Increasingly, power tends to come from information, access and speed. Network Centric Warfare will enable the merging of our warfighting capabilities into a seamless, joint warfighting force. It capitalizes on the trust we place in our junior and noncommissioned officers. As information moves down echelon, so does combat power, meaning smaller joint force packages wield greater combat power. We've seen this most recently in Afghanistan -- very, very small units being very powerful. NCW enables and leverages new military capabilities while allowing the United States to use traditional capabilities more discretely and in new venues. This is allowing the U.S. military to downshift effectively over time from system-level wars (the Cold War and its World War III scenarios) to state-on-state wars (Iraq and Korea major theater wars/scenarios) to the emerging wars fought largely against groups of individuals (Taliban take-down, rolling up the al Qaeda network). Network-centric operations capitalize on greater collaboration and coordination in real-time, the results of which are greater speed of command, greater self-synchronization, and greater precision of desired effects. During the past year, we've seen each of the Departments begin implementation of NCW, primarily at the operational level of war. However, what we're seeing is essentially "NCW for the JTF commander." The next step is NCW for the warfighter -- reflecting increased jointness at the tactical level of war.

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Pulling together the conceptual threads of transformation and the emerging international security environment, one is led to the conclusion that even when homeland security is the principle objective, the preferred U.S. military method is forward deterrence and the projection of power. As a matter of effectiveness, cost, and moral preference, operations will have to shift from being reactive i.e., retaliatory and punitive, to being largely preventative. The implications of "deter forward" necessitate a major force posture review -- rebalancing from the current condition where 80%-plus of the force is U.S. based and everyone is competing for the same finite strategic lift. Accordingly, the emerging American Way of War features:

- **Highly networked, special operations-like forces whose extensive local knowledge and easier insertion will give them greater power and utility than large formations deploying from remote locations**

- **Forces capable of applying information-age techniques and technologies to urban warfare, else we will not deny the enemy his sanctuary**

- **Surveillance-oriented forces to counter weapons of mass destruction, else unambiguous warning will come too late**

- **Concepts of "jointness" that extend down through the tactical level of war**

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- **Interagency capabilities for nation building and constabulary operations, lest our forces get stuck in one place when needed in another**

- **Adjustments in force structure and posture in consideration of the growing homeland security roles of the Coast Guard, the National Guard, the Air National Guard, and the Reserves**

Adding these new responsibilities to the U.S. military is not only a natural development but also a positive one. For it is the United States' continued success in deterring global war and obsolescing state-on-state war that will allow us to begin tackling the far thornier issues of transnational threats and sub-national conflicts – the battlegrounds on which the global war on terrorism will be won.

NOTE: Transformation Trends is provided as a means to highlight new and emerging issues in defense and commercial realms to key decision-makers and in no way constitutes endorsement or official recognition of any idea, concept or program.

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